Letter RO-1 – Sierra Club

RO-1-1 The comment provides an introductory summary of the commenter's concerns about climate change and states they are pleased the Draft EIR has been recirculated. This comment does not raise any issue or include any substantive concern regarding the adequacy of the environmental analysis; therefore, no further response is provided.

RO-1-2 The comment provides an introductory summary of the commenter's concerns with the adequacy of the analysis presented in Section 2.10, Global Climate Change, of the 2019 Recirculation Package. The comment also states that recirculated portions require revision and repeated recirculation. Please refer to the responses that follow for information regarding the concerns raised in this introductory comment. The responses that follow demonstrate that further recirculation of the proposed Project's greenhouse gas (GHG) emissions analysis is not required. Environmental design considerations (EDCs) and mitigation measures identified for the proposed Project are adequate to address the impacts identified for Global Climate Change in the Final EIR.

RO-1-3 The comment incorporates by reference the comment letter submitted by Shute Mihaly & Weinberger LLP, on behalf of the Endangered Habitats League. The comment is noted. Please refer to Response to Comment RO-6-1 through Response to Comment RO-6-133 for the County's responses to the referenced comment letter.

RO-1-4 The comment states that recirculated Section 2.10 fails to fully disclose and quantify the value of the existing, on-site vegetation communities (specifically, chaparral and coastal sage scrub) as carbon sinks and that, as a result, the GHG emissions inventory "must be rejected and recalculated." The comment provides an incomplete summary of the GHG emissions analysis provided on this subject, which did account for the existing vegetation's role as a carbon sink. More specifically, as provided on page 2.10-20 of the 2019 Recirculation Package, one of the emissions categories considered in the analysis is "carbon sequestration." And, Table 2.10-4, Summary of Project GHG Emissions, reports a 4,077 MT CO_2 "Sequestration Loss" that is attributable to site clearing and a 3,799 MT CO_2 "Sequestration Gain" that is attributable to Project-related landscaping and revegetation. As also provided in Appendix C-2 (SRA's Global Climate Change Evaluation) of the 2019 Recirculation Package, "[t]he analysis takes into account the loss in carbon sequestration from development of the existing site" because "the key issue is the balance between the loss of natural vegetation and future carbon storage associated with Project-related landscaping and revegetation of developed areas." As such, the carbon sequestration-related implications of the proposed Project have been considered in the GHG emissions analysis.

RO-1-5 The comment recommends that only electric energy and appliances be utilized by the proposed Project to minimize emissions resulting from natural gas. The comment specifically suggests that natural gas-burning fireplaces should be eliminated and recommends inclusion of electric-powered heat pumps. The comment also notes that the County's Community Choice Energy Program "will soon be adopted" and electricity will be obtainable from a variety of renewable sources.

In response, the feasibility of, economic, energy portfolio diversity and policy ramifications of, and technology necessary to support building electrification for new residential and non-residential development is being studied and evaluated by multiple state agencies, including the California Energy Commission (CEC), California Public Utilities Commission (CPUC) and California Air Resources Board (CARB). Because the issue of building electrification and elimination of natural gas is being addressed from a policy perspective at the state level, the County has made a policy decision not to mandate wholesale building electrification in the absence of a state directive to do so through revisions to Title 24 of the California Code of Regulations.[1]

While some local jurisdictions are pursuing mandatory electrification rules and regulations, there are pending legal challenges associated with such rules and regulations. For example, in July 2019, the City of Berkeley adopted an ordinance banning natural gas and requiring building electrification in new construction beginning in January 2020. However, in November 2019, the California Restaurant Association filed a lawsuit in federal court asserting that the City of Berkeley ordinance is preempted by federal law (the Energy Policy and Conservation Act) and state law (the California Buildings Standards Code and California Energy Code). The California Restaurant Association is arguing that the ordinance is a void and unenforceable exercise of the City of Berkeley's policy power and must be overturned. That lawsuit is pending, and there is no judicial resolution as to the legal authority of cities and counties to adopt such rules and regulations at the time of this response's preparation.

The County also refers the commenter to page 2.10-15 of the 2019 Recirculation Package, which discloses that the proposed Project "would need to implement each of the design-related reduction measures contained in the [County of San Diego's] CAP Consistency Checklist." The CAP Consistency Checklist, which is incorporated by reference and available at https://www.sandiegocounty.gov/content/dam/sdc/pds/advance/cap/publicreviewdocuments/PostBOSDocs/Final%20CAP%20Checklist_FormFillable.pdf, provides that residential projects shall install one of the following types of electric or alternatively fueled water heating systems: solar thermal water heater; tankless electric water heater; storage electric water heaters; electric heat pump water heater; and/or, tankless gas water heater. As the County's CAP is the subject of pending litigation (see Global Response CAP Consistency), the County is requiring the proposed Project to comply with this water heating design parameter via a condition of approval.

[1] Based on the Project applicants' understanding of current market conditions, San Diego homebuyers expect and prefer for detached, single-family residences to include the option for natural gas-burning fireplaces and natural gas appliances, like range tops and laundry hook-ups for clothes dryers. (See, e.g., SoCalGas' "Dual-Fuel ZNE Homes with Natural Gas are More Appealing to Consumers and More Cost-Effective for Builders than Electric-Only," a copy of which is located in Attachment RO1.1 to these Responses to Comments). See also https://www3.socalgas.com/for-your-business/builder-services/visions-home-preference-survey, which summarizes the results of the 2014 survey undertaken by SoCalGas regarding customer preferences. As provided therein, the "survey showed a definitive preference for efficient natural gas appliances over electric in every category." For example, 95 percent of respondents prefer natural gas cooking; 83 percent prefer natural gas space heating; 82 percent prefer natural gas clothes dryers; 91 percent prefer natural gas water heating; and, 95 percent prefer natural gas fireplaces.

Additionally, in response to the comment, natural gas-burning fireplaces in the attached 57 multi-family residences will be eliminated through the following refinement to mitigation measure M-GCC-5 (addition in underline):

> **Beyond Code Efficiencies in Multi-Family Homes and Non-Residential Buildings**
>
> Prior to the issuance of building permits for multi-family residences and non-residential buildings, the Project applicant (or its designee) shall submit pertinent building plans and related application materials that demonstrate, to the satisfaction of San Diego County Planning & Development Services Department, that the Project's multi-family residences and non-residential buildings are designed to improve building energy efficiency by 10 percent over the 2016 Building Energy Efficiency Standards. As part of this demonstration, the building plans and related application materials shall confirm that attached multi-family residences will be designed and constructed without wood-burning or natural gas-burning fireplaces.

The County's Clean Community Energy Program, in February 2019, the County's Board of Supervisors voted unanimously to pursue the development of such a program. However, the program's development is not yet completed, and the Board will be required to take further action on the program before it can be relied upon or implemented.

In closing, the County notes that the proposed Project's mitigation framework for the reduction of GHG emissions includes several beyond code efficiencies that serve to reduce emissions from the built environment, including high-efficiency lighting (M-GCC-2), EnergyStar appliances (M-GCC-3), Zero Net Energy homes (M-GCC-4), and exceedance of the 2016 Title 24 building standards (M-GCC-5). While building electrification may be a strategy added to the state-level regulatory framework in the future for the reduction of GHG emissions, at this point in time and as discussed above, the County does not currently require unilateral deployment of electric-only appliances.

RO-1-6 The comment states that the GHG emissions analysis is "unclear if the various mitigation measures actually result in a substantial reduction in project related GHG," and notes that CEQA requires any such estimated reduction to be supported by substantial evidence. In response, Table 2.10-4, Summary of Project GHG Emissions, of the 2019 Recirculation Package compares the Unmitigated and Mitigated emissions values following implementation of mitigation measures M-GCC-1 through M-GCC-8, and shows that—with mitigation—Project emissions would be reduced to net zero. Related information regarding the calculation parameters also is provided in Table ES-3, Mitigation Measures to Reduce GHG Emissions, of Appendix C-2 of the 2019 Recirculation Package . In response to this comment, the following itemized breakdown of annual mitigation reductions also is provided:

- M-GCC-1 (TDM Strategies): 1,203 MT CO_2e
- M-GCC-2 (High-Efficiency Lighting): 44 MT CO_2e
- M-GCC-3 (EnergyStar Appliances): 9 MT CO_2e
- M-GCC-4 (ZNE Homes): 3,804 MT CO_2e

- M-GCC-5 (Beyond Code Efficiencies): 106 MT CO_2e
- M-GCC-6 (ZEV Charging Infrastructure): not quantified (see note to Table 2.10-4)
- M-GCC-7 (Construction-Related Offsets): 37,973 MT CO_2e
- M-GCC-8 (Operational-Related Offsets): 28,625 MT CO_2e

RO-1-7 The comment refers to the trails and bike lanes required by mitigation measure M-GCC-1 (which contains the TDM strategies recommended to reduce the proposed Project's mobile source-related GHG emissions) and states that those amenities will result in the taking of native vegetation and the construction of surfaces that will increase GHG emissions. Therefore, the comment requests that the GHG emissions analysis "provide the actual amount of lost carbon sequestration from the loss of native vegetation" and information regarding the replanting that will be required to ensure re-growth is biologically equivalent. Please see Response to Comment RO-1-4 for information responsive to this comment; as provided therein, Section 2.10 of the 2019 Recirculation Package reports a 4,077 MT CO_2 "Sequestration Loss" that is attributable to site clearing/removal of existing, native vegetation. This includes the vegetation removal required for construction of bike lanes and trails. The proposed Project's revegetation and landscaping plans, the Landscape Concept Plan as described in the March 2015 Specific Plan (see Exhibit 27 therein) illustrates landscape zones for the project site. Additionally, the Village Design Plan, which is appended to the March 2015 Specific Plan, contains additional relevant information, such as the plant palette, types of shrubs and groundcovers, and perimeter slope hydroseed mix.

RO-1-8 The comment states that additional detail is required regarding the transit opportunities that will be available to the proposed Project's development, and requests that the EIR demonstrate "how this rural development will meet the GHG and Vehicle Miles Traveled (VMT) standards resulting from automobile use." The project is not required to conduct a VMT analysis. However, one was prepared for informational purposes, the findings of which are discussed below in Response to Comment RO-1-18.

As it relates to the availability of public transit, as discussed in Section 1.2.2.1, Specific Plan, of the 2015 Draft EIR, future bus service to the Project site may be provided by Metropolitan Transit Services (MTS). Currently, MTS Routes 707 and 709 serve the Otay Ranch Town Center area and provide service through the Chula Vista Eastern Territories, including the Eastlake Business Center and Southwestern College. South Bay Rapid, a bus rapid transit line 225 connecting the Otay Mesa Port of Entry to Downtown San Diego commenced service in January 2019. This route includes a station and park and ride at the Otay Ranch Town Center, an approximate 4-mile drive from the proposed Project. The Project Applicants will coordinate with MTS to evaluate the feasibility of extending public transportation service to the Project site during build-out. Should the transit agency extend service to the Project site, the applicants will coordinate with MTS on the construction of an appropriate bus stop facility in the Village Core to serve residents and workers, a commitment that will be imposed via a condition of approval for the proposed Project. Furthermore, please refer to Response to Comment RO-6-61 regarding the discounted ride-share-pool services that will be provided by the HOA to residents, as well as the proposed mobility hub.

The reduction assigned to mitigation measure M-GCC-1's Transportation Demand Management (TDM) strategies is substantiated in Appendix A (Calculation of GHGs from Vehicles) of Appendix C-2 of the 2019 Recirculation Package. More specifically, Appendix A contains a technical memorandum, authored by Chen Ryan Associates, that quantifies the VMT reduction assigned to the provision of information regarding transportation options; as discussed therein (see Table 1); such information dissemination is expected to reduce VMT by 0.6 percent.

As for this "rural" project's meeting of GHG standards for automobile use, the significance of a project's impact under CEQA is measured in relation to the emissions inventory as a whole, and not on a piecemeal basis. As discussed in Section 2.10 of the 2019 Recirculation Package, the proposed Project's GHG emissions would be reduced to net zero with mitigation, reducing the proposed Project's impacts to a level below significant.

Finally, the comment characterizes the recirculation of the project's EIR as "result[ing] from the County of San Diego's failed attempt to justify sprawl development with unprovable claims of conforming to State of California GHG standards." This is an opinion of the commenter, which will be included in the record of proceedings presented to the decision-making body for consideration. The commenter is referred to the "Decision and Explanation Regarding Recirculation of the Draft Environmental Impact Report" for the project, dated April 11, 2019. As explained therein, the EIR's Global Climate Change Section was recirculated as a result of California Supreme Court decisions and updated analysis showing that impacts would be less than significant with mitigation (whereas, in the 2015 Draft EIR, mitigation was not determined to be required).

RO-1-9 First, the comment asks why single-family homes are not required to use high-efficiency lighting and EnergyStar appliances, as required by multi-family homes per mitigation measures M-GCC-2 and M-GCC-3. In response, and as explained on page 2.10-35 of the 2019 Recirculation Package, "M-GCC-4's requirement to design Zero Net Energy single-family residences encompasses the same types of efficiencies associated with high-efficiency lighting and EnergyStar appliances called for by M-GCC-2 and M-GCC-3, respectively, for the proposed Project's multi-family residences."

Second, the comment states that the use of high-efficiency lighting and EnergyStar appliances "only" reduces the increase in GHG and does not "mitigate it." In response, as defined in CEQA Guidelines Section 15370, mitigation includes reducing an impact.

Third, the comment states that high-efficiency lighting already is required by the 2016 Title 24 building standards for "any and all home types." As such, the comment claims any reduction associated with the provision of high-efficiency lighting in the residential setting already is a matter of regulatory compliance. In response, the parameter of the mitigation commitment was derived to be consistent with the modeling platform—CalEEMod—which assigns a mitigation-based emissions reduction for high-efficiency lighting. More specifically, CalEEMod's default input parameter applies the 2016 Title 24 building standards to new residential and non-residential development. However, the model also allows for additional reductions in energy use from high-efficiency lighting beyond the requirements of Title 24.

As a mitigation measure, therefore, the proposed Project will utilize high-efficiency lighting that reduces energy use by 15 percent below lighting as permitted in the 2016 Title 24 standards. This GHG reduction strategy, therefore, has been included as a mitigation measure, recognizing that additional lighting efficiencies are available. In response to the comment, the following refinement to mitigation measure M-GCC-2 (addition in underline) will be included in the Final EIR: "… the Project shall utilize high-efficiency interior lighting in the multi-family residences and non-residential buildings that utilizes 15 percent less energy than otherwise permitted by the 2016 Building Energy Efficiency Standards."

Fourth, the comment states that EnergyStar appliances are "virtually ubiquitous." While the County agrees that EnergyStar appliances have increased in popularity and have penetrated the market, the installation of such appliances is not mandated as a matter of code. Therefore, requiring the installation of such appliances—via a CEQA mitigation measure—is an effective way to reduce GHG emissions.

Fifth, the comment requests that the specific EnergyStar appliances to be installed be identified. As provided in mitigation measure M-GCC-3, "[t]he required EnergyStar appliances include clothes washers, dishwashers, fans and refrigerators."

Finally, the comment mentions again a concern with the consumption of natural gas. Please see Response to Comment RO-1-5 for information responsive to this subject.

RO-1-10 The comment states that mitigation measure M-GCC-4's requirement for single-family residences that meet Zero Net Energy (ZNE) design standards has two problems. First, the comment states that the GHG emissions analysis does not identify the GHG reduction attributable to this mitigation measure. Second, the comment questions how residences that consume natural gas can achieve ZNE design.

In response to the first component of the comment, please see Response to Comment RO-1-6, which contains information regarding the GHG emissions reduction attributable to implementation of mitigation measure M-GCC-4. As for the second component of the comment, please see Appendix C (Calculation of GHGs from Energy Use) in Appendix C-2 of the 2019 Recirculation Package. Appendix C contains the Village 13 Building Analysis, as prepared by ConSol, a building energy efficiency expert. The Village 13 Building Analysis contains a detailed assessment of how two prototypes, selected to be representative of the proposed Project's anticipated residential building product, can achieve the CEC's ZNE definition. The CEC's ZNE definition (which is from its 2015 Integrated Energy Policy Report) is set forth on page 2.10-9 of the 2019 Recirculation Package; notably, the definition contains no prohibition on the use of natural gas. Instead, a ZNE building "is one where the value of the energy produced by on-site renewable energy resources is equal to the value of the energy consumed annually by the building." This definition does not require that a ZNE building not emit GHGs.

RO-1-11 The comment states that mitigation measure M-GCC-5 leaves three unanswered questions: the quantity of GHG reduction; the omission of single-family homes from the measure's application; and the measure's allowance of an increase in GHG emissions. In response to the first component of the comment, please see Response to Comment RO-1-6, which contains

information regarding the GHG emissions reduction attributable to implementation of mitigation measure M-GCC-5. As for the second component of the comment, single-family homes are subject to M-GCC-4, which requires ZNE design. The proposed Project's mitigation framework has been designed and customized to the various land uses proposed for development, recognizing that different emission reduction options are best suited to various land uses. Therefore, emissions related to single-family homes are not included in M-GCC-5 because they are already addressed in M-GCC-4. It also is noted that, to achieve ZNE design, ConSol estimates that the proposed Project's single-family residences will need to exceed the 2016 Title 24 building standards by approximately 15 percent, prior to the addition of photovoltaic (PV) systems. As to the comment's third component, mitigation is effective—for purposes of CEQA—if it reduces the quantity of emissions associated with a project. (See CEQA Guidelines Sections 15126.4(c)(2) and 15370.) Here, M-GCC-5 will serve to reduce the incremental increase in GHG emissions attributable to the proposed Project's multi-family homes and non-residential buildings.

RO-1-12 The comment asks why mitigation measure M-GCC-6 does not require the proposed Project to equip all residential garages with electric vehicle (EV) chargers. The commenter asks what is the projection of the number of residents that would own zero emission vehicles (ZEVs) and further states the DEIR must calculate the GHG emissions reduction attributable to M-GCC-6. In response, mitigation measure M-GCC-6 requires that *all* residential garages be "EV ready" through the installation of the necessary wiring (thereby facilitating the subsequent installation of EV chargers), *and* that 50 percent of all residential garages be equipped with EV chargers. These EV charging infrastructure parameters are expected to exceed near-term demand for EV chargers, based on existing market penetration rates, and facilitate the subsequent installation of then current EV charging technology in response to potential longer-term demand. The M-GCC-6 mitigation parameters exceed all code-based requirements and align with state policies for the increased penetration of ZEVs in the passenger vehicle fleet. As for projecting the number of residents that would own ZEVs, such a projection was not conducted because no emissions reduction benefit has been quantified for mitigation measure M-GCC-6. Instead, as explained on page 2.10-39 of the 2019 Recirculation Package, "no emissions reduction value has been assigned to M-GCC-6 due to estimation complexities. However, the mitigation strategy provides important infrastructure-level support for the State's ZEV deployment objectives."

RO-1-13 The comment references a recent decision from the San Diego County Superior Court that it claims "declares illegal" the use of out-of-County offsets for the reduction of GHG emissions. For information responsive to this comment, please see Global Response R1: Carbon Offsets, and Global Response R2: County of San Diego Climate Action Plan. As provided therein, the Project's proposed use of carbon offsets is consistent with applicable policies of the County of San Diego General Plan and CEQA, and not in violation of the court's ruling.

RO-1-14 The comment states that the geographic hierarchy set forth in mitigation measure M-GCC-7 for carbon offsets "was thrown out in its entirety" by the San Diego County Superior Court ruling referenced in Response to Comment RO-1-13. In response, please refer to Global Response R2: County of San Diego Climate Action Plan, which explains why the proposed Project's CEQA

analysis is independent from and not implicated by the pending litigation concerning the County's Climate Action Plan.

RO-1-15 The comment states that there are no calculations presented in the GHG emissions analysis to show that the proposed Project, with implementation of the eight (8) recommended mitigation measures, will achieve a net zero emissions level. Please see Response to Comment RO-1-6 for relevant information. As discussed therein, both Section 2.10 of the 2019 Recirculation Package, and its supporting technical analyses located in Appendix C-2, present information and analysis pertaining to the quantified reduction and effectiveness of the mitigation measures.

RO-1-16 The comment references a 15 percent reduction in GHG, and states that "[c]lear evidence is required" that it "will actually occur." In response, the comment erroneously assumes the 15 percent reduction target applies to individual projects. As discussed on page 2.10-11 of the 2019 Recirculation Package, the 15 percent reduction target is a target adopted by CARB, pursuant to Senate Bill 375, *for the SANDAG region*. Additionally, while current controversy regarding SANDAG's SB 375 performance may exist, CARB did issue an executive order (G-15-075) confirming that SANDAG's GHG emissions quantification determination for San Diego Forward: The Regional Plan was adequate and complete (2019 Recirculation Package, page 2.10-13). Further, in this case, the proposed Project's development parameters are part of the existing regional planning framework that was established as part of the approved of the Otay Ranch GDP/SRP in 1993.

RO-1-17 The comment requests that the County retain an "expert, independent consultant" to "certify the adequacy of any claims to in-county mitigation." Further, the comment states that "such certification would need to be approved by a vote of the County Board of Supervisors." In response, Valorie Thompson, of Scientific Resources Associated, prepared the GHG emissions analysis for the proposed Project. Ms. Thompson's work was independently reviewed and evaluated by County staff and the County's own expert, Ms. Poonam Boparai of Ascent Environmental. As required by CEQA, the County's Board of Supervisors will independently review and vote on whether the proposed Project's EIR should be certified; in conjunction with that review, the comments and responses provided herein will be included in the record of proceedings.

RO-1-18 The comment states that there is no new analysis of traffic impacts in the revised portions of the Draft EIR recirculated in 2019 (2019 Recirculation Package), that the 2015 traffic report included in the 2015 Draft EIR did not consider vehicle miles traveled (VMT), and that the concept of level of service (LOS) has been revoked and replaced with VMT. On those grounds, the comment contends that a new traffic analysis should be conducted because the 2015 traffic report prepared for the Draft EIR is inadequate.

As further explained below, no comments requesting a VMT analysis were submitted during the public comment period on the Draft EIR in 2015; the comment does not require a response as it is outside the scope of the 2019 Recirculation Package; and, in any event, CEQA does not require that the County, as part of the traffic analysis of this EIR, include an evaluation of VMT.

As background, the Draft EIR was circulated for public review in April–May 2015. The Draft EIR did not contain, nor was it required to contain, an analysis of the proposed Project's

transportation impacts relative to VMT. During the public review of the Draft EIR, the public neither commented on the Draft EIR's lack of the VMT analysis nor was such analysis requested.

Subsequently, the County revised limited portions of the Draft EIR and circulated only those portions for public review. Specifically, Draft EIR Section 2.10 (Global Climate Change) and Chapter 4.0 (Project Alternatives) were revised, and the two revised sections were circulated for public review in April–May 2019. Of note, the only revision made to Chapter 4.0 was the addition of an alternative, Alternative H. Now, as part of its comments on the 2019 Recirculation Package, Sierra Club raises for the first time its comment regarding the Draft EIR's lack of VMT analysis in the transportation section.

However, as noted above, the transportation section of the Draft EIR was not subject to public review as part of the 2019 Recirculation Package. The County elected to limit comments during public review of the 2019 Recirculation Package to its scope, pursuant to CEQA Guidelines 15088.5(f)(2) and 15163. (*See* Recirculation Readers Guide at https://www.sandiegocounty.gov/content/sdc/pds/ceqa/OtayRanchVillage13.html; *see also, generally, Preservation Action Council v. City of San Jose* (2006) 141 Cal.App.4th 1336, 1357-58 [CEQA limits public opportunity to comment on the analysis presented in the 2019 Recirculation Package].) As a result of its election to limit public review, the County is required to respond only to those comments received during the recirculation comment period that relate to the 2019 Recirculation Package. Thus, no response to comments regarding the VMT analysis in the Draft EIR's transportation section is required.

To the extent the comment regards the analysis of alternatives presented in the Recirculated Chapter 4.0, the County was only required to evaluate the alternatives within the same analytical framework used for the proposed Project so as to provide a meaningful comparison with the proposed Project (i.e., to compare apples with apples, rather than apples with an orange). (CEQA Guideline 15126.6(d) [evaluation of alternatives in an EIR is required to allow "meaningful . . . comparison with the proposed project."].) While the 2019 Recirculation Package included analysis of traffic impacts, that analysis was limited to an evaluation of the Project alternatives relative to the proposed Project. Thus, to the extent the comments request a VMT analysis relative to the alternatives presented in recirculated Chapter 4.0, the comments are outside the scope of the 2019 Recirculation Package and, therefore, the County is not required to prepare a response to the comments.

Additionally, notwithstanding the above, even if the comment was within the scope of the 2019 Recirculation Package, as explained below, neither CEQA nor the County requires at this time that the EIR contain an analysis of a project's transportation-related VMT impacts.

In 2013, SB 743 was signed into law to create a process to change the way that transportation impacts are analyzed under CEQA. SB 743 required the Governor's Office of Planning and Research (OPR) to devise an alternative to LOS analysis and to revise the CEQA Guidelines accordingly. Last December, the Natural Resources Agency adopted revised CEQA Guidelines to implement SB 743. Specifically, CEQA Guideline 15064.3 requires that, after July 1, 2020, lead agencies analyze the potential transportation impacts of a proposed project based on a VMT

metric. Under the revised Guidelines, while lead agencies may adopt a VMT guideline prior to July 1, 2020, they are not required to do so until that time. As of this writing, the County has not yet elected to be governed by the provisions of Section 15064.3; that is, it is has not yet adopted a VMT methodology or the requirement that EIRs contain such analysis, nor was it required to do so. Therefore, based on the revised Guidelines, the County, as well as other lead agencies, is expressly permitted to rely on LOS analysis to assess traffic-related impacts and is not required to provide analysis relative to VMT.

Nonetheless, although not required to consider traffic impacts in light of VMT, in response to the comment, the County has prepared such an analysis, presented below, for informational purpose only. (*See* Pub. Res. Code section 21100; *Saltonstall v. City of Sacramento* (2015) 234 Cal.App.5th 549, 576.) The methodologies utilized here, including related thresholds, are for the limited purpose of the analysis presented here and are not intended to bind the County to utilizing any similar methodologies in the future. That is, the analysis is provided to inform the public and decision maker, although significant impacts and related mitigation measures remain as identified in the Draft EIR and recirculated portions of that document and are not altered by the analysis presented here. Thus, the discussion of traffic impacts under the VMT methodology presented below is consistent with and in furtherance of the Draft EIR's informational purpose.

SB 743 Analysis

The analysis presented below is based on the technical memorandum prepared by Chen Ryan Associates, *SB 743 Transportation VMT Analysis – Otay Ranch Resort Village Proposed Project/Alternative H* (October 7, 2019) (Technical Memorandum). A copy of the Technical Memorandum is attached to Appendix C-2 as Appendix F.

Neither the CEQA Guidelines nor the related technical advisory issued by the State Office of Planning and Research (*OPR Technical Advisory*) requires that a specific methodology be used when evaluating a project's VMT. Instead, the CEQA Guidelines state that "lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure" and that "a lead agency may use models to estimate a project's vehicle miles traveled, and may revise those estimates to reflect professional judgment based on substantial evidence," and "any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project,"."

In essence, the CEQA Guidelines defer to a local agency's professional judgment supported by substantial evidence when deciding how best to model VMT, stating that "a lead agency's evaluation of the vehicle miles traveled with a project is subject to a rule of reason." While the CEQA Guidelines were approved and adopted by the Natural Resources Agency, the County of San Diego has not yet adopted methodologies for performing VMT analysis per SB 743. Accordingly, the qualitative and quantitative analysis presented here is based on the suggested approach presented in the CEQA Guidelines and related *OPR Technical Advisory*.

Consistent with SB 743 and the CEQA Guidelines, the analyses presented below address (I) proposed Project/Alternative H VMT per capita; (2) induced vehicle travel due to capacity expansion; and (3) Project alternatives VMT analysis.

I. VMT Per Capita Analysis

Proposed Project/Alternative H VMT per Capita

As recommended in the *OPR Technical Advisory*, an analysis was conducted to compare the proposed Project/Alternative H VMT per capita to the existing VMT per capita for the San Diego Region and the County of San Diego Southwestern subregion. Table 1 displays the automobile home-based VMT per capita for the proposed Project/Alternative H. VMT output from the SANDAG model is provided in Technical Memorandum, Attachment A.

Table 1. Otay Ranch Resort Village – Proposed Project/Alternative H
Vehicle Miles Traveled per Capita

Study Area	# of Residents	Total Trips	Vehicle Miles Trips	Vehicle Miles Travelled per Resident
Proposed Project/Alternative H	5,444	19,747	142,925	26.3

Source: SANDAG Series 13 Regional Model, October 2018

As shown in Table 1, the automobile home-based VMT per capita for the proposed Project is projected to be 26.3 miles per day.

Comparative Baseline and Threshold

Per the guidance included in the *OPR Technical Advisory*, the VMT per capita for the proposed Project/Alternative H is compared with the San Diego Regional VMT per capita to identify if it exceeds the recommended thresholds.

According to the *OPR Technical Advisory*, local jurisdictions have the flexibility to utilize alternative thresholds from those provided in the *OPR Technical Advisory*. However, because the County of San Diego has not yet adopted its own VMT thresholds, for the limited purpose of this analysis, the OPR recommended 15 percent below existing VMT per capita of the regional average is utilized as the applicable threshold; that is, if the project's VMT per capita is greater than 15 percent below the baseline (existing regional VMT per capita), the project VMT would exceed the standard. The regional average VMT per capita used in this analysis is based on the aggregate VMT of the 18 cities in San Diego County and the unincorporated portion of San Diego County. As shown in Table 2, the regional average VMT per capita is 17.60.

As mentioned previously, the proposed Project is located in the unincorporated Southwestern subregional area of San Diego County. To provide a comparison of VMT efficiency between the proposed Project and other projects in the unincorporated area of San Diego County, a comparison of the proposed Project/Alternative H VMT per capita against the Southwestern region VMT per capita also is provided. As shown in Table 2, the Southwestern regional average VMT per capita is 21.52.

As also shown in Table 2, assuming application of the *OPR Technical Advisory* criteria, the threshold to be applied here is 15 percent below the existing San Diego Region VMT/capita and the sub-regional Southwestern Region of San Diego County, or 14.96 (17.60 miles * 85 percent) and 18.29 (21.52 miles *85 percent), respectively**.**

Table 2. San Diego Region Vehicle Miles Traveled per Capita

Study area	Source	Vehicle Miles Trips per Resident	Threshold per Capita (15% below existing VMT)
San Diego Region	Obtained from SANDAG Regional Transportation Plan Year 2012 (RTP) & the 2012 Run Based on the SANDAG ABM Scenario 720 model. (http://sandag.github.io/sb743/sb743_concept_map.htm)	17.60	14.96*
San Diego County Southwestern Region		21.52	18.29*

Source: SANDAG Regional RTP & 2012 Run Base on SANDAG ABM Scenario 720, Retrieved in October 2018
Note: VMT threshold based on 85% of the San Diego Region VMT Year 2012 and the Southwestern Sub-regional VMT Year 2012.

As shown in Table 2, based on the data presented in the table, the proposed Project/Alternative H VMT per capita for residential land use types of 26.3 would exceed the corresponding threshold suggested in the *OPR Technical Advisory*[2] when compared to both the regional threshold and the sub-regional threshold.

To reduce the average VMT per capita, the proposed Project/Alternative H includes a Transportation Demand Management (TDM) Program. Implementation of the TDM Program is anticipated to reduce the VMT per capita generated by 4.97 percent; see *Transportation Demand Management Program Evaluation – Otay Ranch Resort Village Proposed Project* (Chen Ryan), included as Appendix C-2 of the 2019 Recirculation Package (also included in Attachment B to the Technical Memorandum). Thus, with implementation of the TDM Program, the proposed Project/Alternative H is forecast to generate 24.9 VMT per capita (26.3 VMT per capita * (1 - .0497)), which would continue to be above the OPR threshold.

The VMT per capita analysis presented above provides a snapshot of the VMT per capita associated with the proposed Project/Alternative H. However, both the proposed Project and Alternative H would be developed as part of the Otay Ranch General Development Plan (GDP) sub-region approved by the City of Chula Vista and County of San Diego as part of the Sub-Regional Plan (SRP) on October 28, 1993. The Otay Ranch GDP land uses are predominantly made up of suburban densities and are similar to the proposed Project and Alternative H land uses. Since both the proposed Project and Alternative H would be part of the larger SRP with a mix of uses, it also is appropriate to evaluate the proposed Project and Alternative H VMT per capita as part of the Otay Ranch GDP as a whole. Figure 1 displays the full Otay Ranch GDP area, as compared to the San Diego Region.

To conduct this additional analysis, the VMT per capita for the Otay Ranch GDP was calculated using the SANDAG Series 13 Year 2035 Regional Model using the VMT methodology developed by SANDAG. Table 3 displays the VMT per capita for the Otay Ranch GDP. VMT output from the SANDAG model is provided in Technical Memorandum, Attachment C.

[2] As of the date of this memo, the County of San Diego has not yet adopted a VMT-based significance threshold and is not required to do so until July 1, 2020 (CEQA Guidelines, Section 15064.3.). Accordingly, as previously noted, the analysis presented here is provided for informational purposes only. The thresholds utilized in the analysis have not been reviewed or adopted by the County of San Diego. Therefore, the analysis presented here is not based on an adopted threshold by the County and, accordingly, has no precedential value for use in determining CEQA-based impacts for County development projects.

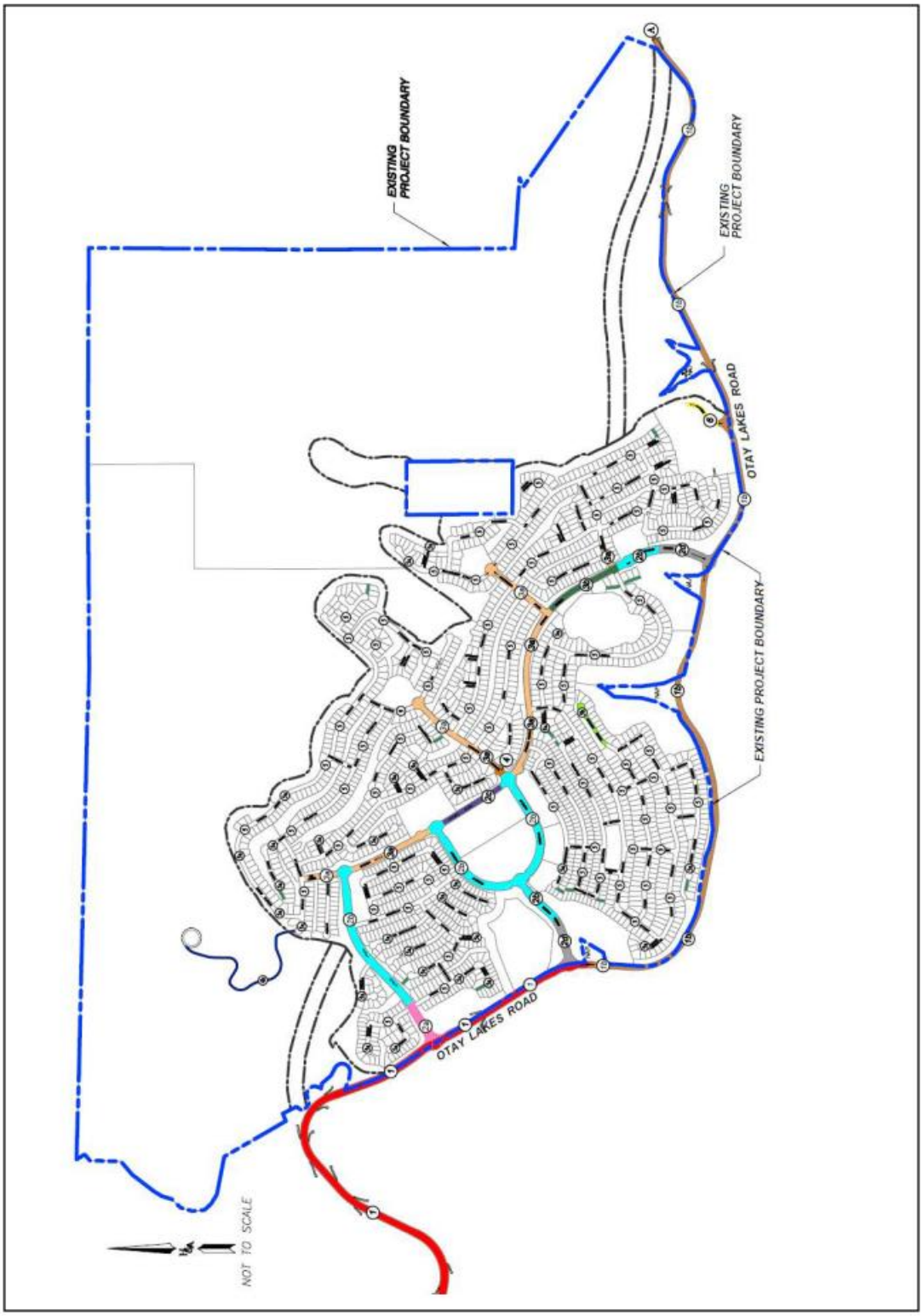

Figure 1
Project Site Plan

Otay Ranch Resort Village - Alternative H Transportation Demand Management Program Evaluation

CHEN RYAN

Table 3. Otay Ranch Resort Village – Otay Ranch GDP Vehicle Miles Traveled by Capita

Study area	# of Residents	Total Trips	Vehicle Miles Trips	Vehicle Miles Trips per Resident
Otay Ranch GDP	112,487	398,864	1,762,701	15.7

Source: SANDAG Series 13 Regional Model, October 2018

As shown in Table 3, the Otay Ranch GDP VMT per Capita, including the proposed Project/Alternative H, is projected to be 15.7 miles, which is higher than the 14.96 miles threshold based on the San Diego region. Therefore, when viewed as part of the larger Otay Ranch GDP, the proposed Project/Alternative H would still exceed the VMT per Capita threshold outlined in the *OPR Technical Advisory*, shown in Table 2. It should be noted, while TDM measures could help to lower the overall VMT per Capita generated by the Otay Ranch GDP, the proposed Project would not have the authority to implement or enforce these measures; therefore, no TDM plan is recommended at this time. However, since approval of the Otay Ranch GDP, additional projects have been approved representing over 10,000 residential units and ancillary development. These projects have included TDM measures that would further reduce the VMT per capita for the Otay Ranch GDP. TDM measures for these projects can be found on the City of Chula Vista website (https://www.chulavistaca.gov/departments/development-services/planning/planning-digital-library/eir), which illustrates that a TDM plan is proposed by each of these villages.

However, when compared to the County of San Diego Southwestern VMT per Capita, the Otay Ranch GDP VMT per Capita, including the proposed Project, is lower than the sub-regional VMT per Capita. Thus, the Otay Ranch GDP sub-region is more efficient than the County of San Diego Southwestern sub-region.

II. Induced Vehicle Travel Due to Capacity Expansion Analysis

The CEQA Guidelines indicate that a VMT analysis should be conducted for roadway capacity projects and the *OPR Technical Advisory* refers to the potential for induced travel, and its associated effects. Induced travel occurs when improvements to a roadway facility enhance traffic operations and/or relieve congestion to the point at which travelers have a higher incentive to make a vehicular trip in lieu of a different mode of travel, or not taking the trip at all.

OPR Technical Advisory

Appendix 2 of the *OPR Technical Advisory* identifies the following five factors that contribute to overall induced travel:

1. *Changes in Trip Length*: Roadway capacity could result in the ability to travel a longer distance in a shorter period of time, thereby making farther away destinations more attractive and resulting in longer trip lengths and more VMT.
2. *Changes in Mode Choice*: Roadway capacity could result in reduced automobile travel time, causing people to shift to automobile use from other travel modes, resulting in more auto trips and increased VMT.

3. *Route Changes*: Faster travel time may attract more drivers to a route with expanded capacity, which can increase or decrease vehicle travel depending on whether it shortens or lengthens trips.
4. *Newly Generated Trips*: Increasing travel speeds from added roadway capacity could induce additional vehicle trips, resulting in increased VMT.
5. *Land Use Changes*: Faster travel times from added roadway capacity could lead to land development farther out on the corridor, leading to a long-term incremental increase in trip lengths, resulting in increased VMT.

If the proposed Project or Alternative H were to qualify or align with any of the factors above, the project may result in an increase in VMT from induced travel.

Proposed Project/Alternative H Proposed Roadway Improvements

The proposed Project/Alternative H proposes to implement the following improvements along Otay Lakes Road, some of which would result in higher roadway capacities:

- Improve Otay Lakes Road, between the City of Chula Vista and Project Driveway #2 (approximately 1.5 miles), from its existing two-lane undivided roadway (LOS E roadway capacity of 16,200 ADT) configuration to a four-lane Boulevard (four lanes with a raised median with a LOS E roadway capacity of 30,000 ADT).
- Improve Otay Lakes Road, between Project Driveway #2 and the eastern project limit, from its existing two-lane undivided roadway configuration to a two-lane Community Collector with Improvement options.
- Construct roundabouts on Otay Lakes Road at each project driveway intersection (three for the proposed Project and four for Alternative H).
- Implement a multi-purpose trail adjacent to Otay Lakes Road.

As to Otay Lakes Road, Table 4 displays the functional (existing) and proposed roadway classifications on Otay Lakes Road, along the Project frontage.

Table 4. Otay Lakes Road Cross-section and Mobility Element Classification

Otay Lakes Road	Existing Cross-section	County of San Diego Mobility Element Classification	Otay Ranch Resort Village Proposed Classification
Between Chula Vista City Limit and Project Driveway #2	2-lane Undivided Roadway	4-lane Major Road (4.1B)	4-lane Boulevard (4.2A)
Project Driveway #2 and eastern project limit	2-lane Undivided Roadway	2-lane Community Collector with Improvement Options (2.1D)	2-lane Community Collector with Improvement Options (2.1D)

Source: Chen Ryan Associates, July 2019

Alternative H would not include the realignment of Otay Lakes Road from its existing location on the western and southern edges of the Project site to the approximate middle of the site. However, the road would undergo improvements, including a widening from a two- to a four-lane Boulevard with a Raised Median between the western edge of the Project boundary and the second Project driveway. Otay Lakes Road would be improved to include intermittent turn lanes and an additional drainage within its existing right-of-way from the second Project driveway to the eastern Project boundary. When compared to the proposed Project, the proposed

improvements associated with Alternative H along Otay Lakes Road would result in a slightly greater traffic calming effect due to the additional roundabout, thus further reducing roadway speeds and increasing walkability and safety for cyclists along Otay Lakes Road.

To determine if the improvements listed above could potentially result in induced travel, a roadway travel speed analysis was conducted along Otay Lakes Road. The travel speed analysis helps to determine if the improvements will allow for higher roadway speeds along Otay Lakes Road, resulting in short travel times, and ultimately incentivizing additional vehicular travel or induced VMT.

Existing Travel Speed – Otay Lakes Road

To determine the average current travel speed along Otay Lakes Road between the Chula Vista City Limit and the eastern project limit, a Streetlight segment analysis was conducted. This method was developed by Streetlightdata.com and uses a sampling of anonymous Global Positioning System (GPS) data, primarily obtained from smart phone apps using the GPS tracking, or from cars with GPS units. The GPS data received by the system provides the origin and destination of the registered vehicle, as well as the average travel speed at various points along the trip. This data is aggregated to the desired time period and geographically selected location of the requested analysis. The data used for the analysis presented here was collected along the Otay Lakes Road project frontage during the months of March, April, September, and October of 2018. Based on the Streetlight segment analysis, the current average travel speed on Otay Lakes Road is 53 miles per hour (mph). The Streetlight analysis results are provided in Technical Memorandum, Attachment D.

Travel Speed with Proposed Project/Alternative H – Otay Lakes Road

A Synchro SimTraffic microsimulation analysis was conducted to project the average travel speed along Otay Lakes Road with implementation of the proposed Project/Alternative H. The Roadway Improvements proposed by the proposed Project/Alterative H (discussed in the previous section), as well as the additional traffic that would be generated from its land uses, were included in the Synchro SimTraffic analysis. Based on the Synchro SimTraffic analysis, the average travel speed along the improved section of Otay Lakes Road would be 26 mph. The reduction in average travel speed along the improved segment is due to traffic calming measures along Otay Lakes Road, including the four roundabouts. SimTraffic analysis output is provided in Technical Memorandum, Attachment E.

Conclusion

As noted above, due to the proposed roundabouts along Otay Lakes Road, which would calm the traffic flow and increase safety along Otay Lakes Road, the average travel speed along Otay Lakes Road would be reduced from 53 mph under Existing conditions to 26 mph with the roadway improvements proposed by the proposed Project/Alternative H.

Thus, the proposed improvements to Otay Lakes Road would not result in increased travel speeds making it more attractive to drivers and, instead, would have the opposite effect by resulting in decreased travel speeds and, relatedly, increased travel times.

Since the proposed improvements along Otay Lakes Road would increase travel times along the roadway, it is unlikely that automobile users along Otay Lakes Road would travel to farther destinations (i.e., increase their trip length) with the implementation of these improvements. Non-automobile users are also unlikely to switch to automobiles since the slower Otay Lakes

Road would be less enticing to drive on than current conditions. At the same time, the slower and safer Otay Lakes Road likely would not attract drivers from other roadways within the area, nor would it create new trips (new drivers who are likely to drive the route due to a fast and efficient roadway). Additionally, the proposed improvements along Otay Lakes Road would not decrease travel times (i.e., create faster travel times), thus the improvements would not encourage new developments east of the proposed Project/Alternative H site. Additionally, Otay Ranch Village 15, which is located east of Village 13, was acquired by the State of California for conservation purposes, further discouraging development and growth inducement east of the site. Finally, as noted in the Traffic Impact Study, east of the proposed Project is Planning Area 17, which was designated by the County of San Diego General Plan Update as an open space reserve; therefore, new development is not anticipated to occur east of the Project site.

As shown above, the proposed improvements along Otay Lakes Road would not be capacity enhancing and, instead, would be traffic calming in nature. The proposed improvements are anticipated to reduce the excessive vehicular travel speeds along Otay Lakes Road, increase the safety for all users, and increase travel times along the roadway (due to the reduced speeds). From the standpoint of effects related to trip length, travel mode, and routing, the analysis presented above demonstrates that the proposed roadway capacity enhancing improvements would not reduce travel times or increase travel speeds along Otay Lakes Road. Therefore, the proposed improvements are not anticipated to induce latent travel demand that is currently deterred due to congestion. Additionally, due to the lower travel speeds, traffic is not anticipated to detour from other roadways to Otay Lakes from other parallel routes due to these improvements. Therefore, based on the criteria outlined in Appendix 2 of the *OPR Technical Advisory,* the proposed improvements to Otay Lakes Road would not induce growth or an increase in VMT and, therefore, would not cause a threshold exceedance under the induced growth criteria.

III. VMT Analysis – Project Alternatives

The purpose of this section is to provide a comparison between those Project alternatives other than Alternative H, and the proposed Project/Alternative H relative to VMT.

Alternative Description and VMT Comparison

The 2019 Recirculation Package evaluated a total of seven alternatives other than Alternative H. A description of each alternative, along with comparative VMT analysis, is provided below.

Alternative A – No Build

Alternative A is the no project alternative and would leave the site in its existing state. Because no development would occur there would be no average daily trips and no VMT would be generated. Therefore, VMT would be less than the proposed Project/Alternative H.

Alternative B

Alternative B would develop the site consistent with the existing Otay Subregional Plan (SRP). This alternative would result in the same number of resident units with less single-family and more multi-family, resulting in a slightly lower number of ADT. However, Alternative B would implement a golf course of approximately 142 acres and a larger Resort of approximately 134 acres and 800 hotel rooms, significantly more than the proposed Project. The absence of an on-site elementary school would result in an increase in trip lengths and, consequently, VMT as

students within the Village would need to travel off-site and could not bike or walk to school. Overall ADT would be approximately 3,266 trips higher than the proposed Project with trip lengths being greater for the golf course and Resort due to the type of land use in comparison to residential uses. Therefore, VMT would be greater than the proposed Project/Alternative H and likely greater on a per capita basis.

Alternative C

Alternative C would implement land uses consistent with the existing Otay SRP on a development footprint that is 296 acres smaller than the proposed Project. This alternative would result in 697 fewer residential units, a golf course of 83 acres, and a larger Resort of 800 rooms on 114 acres. The absence of an on-site elementary school would result in an increase in trip lengths and, consequently, VMT as students within the Village would need to travel off-site and could not bike or walk to school. Overall ADT would be approximately 3,308 trips lower than the proposed Project with trip lengths being greater for the golf course and Resort due to the type of land use in comparison to residential uses. Although total ADT would be reduced, the reduction in residential ADT would be offset by an increase in ADT from the non-residential land uses of the golf course and Resort. Therefore, VMT likely would be greater than the proposed Project/Alternative H and likely greater on a per capita basis.

Alternative D

Alternative D would implement the same number of residential units as the proposed Project on a development footprint that is 296 acres smaller than the proposed Project. This alternative would result in 337 fewer single-family residential units and a corresponding increase in multi-family units with a larger Resort of 800 rooms on 61 acres. As with the proposed Project, no golf course would be developed. Overall ADT would be approximately 2,974 trips lower than the proposed Project due to the reduction in single-family units with trip lengths being greater for the Resort due to the type of land use in comparison to residential uses. The reduction in ADT and VMT for residential units would be offset by an increase in ADT from the non-residential land use of the Resort. Therefore, VMT would be greater than the proposed Project/Alternative H and likely greater on a per capita basis.

Alternative E

Alternative E would implement land uses consistent with the existing Otay SRP on a development footprint that is 230 acres smaller than the proposed Project. This alternative would result in 547 fewer residential units and a larger Resort of 800 rooms on 20 acres. As with the proposed Project, no golf course would be developed. Overall ADT would be approximately 5,493 trips lower than the proposed Project with trip lengths and, consequently, VMT greater for the Resort due to the type of land use in comparison to residential uses. Total ADT would be reduced with the reduction in residential ADT offsetting an increase in ADT from the non-residential land uses of the Resort. Therefore, VMT likely would be comparable to the proposed Project/Alternative H and VMT per capita would be equal to or slightly higher than the proposed Project.

Alternative F

Alternative F would implement the same number of residential units on a development footprint that is 230 acres smaller than the proposed Project. This alternative would result in 613 fewer single-family residential units and a corresponding increase in multi-family units with a larger Resort of 800 rooms on 20 acres. As with the proposed Project, no golf course would be developed. Overall ADT would be approximately 1,196 trips lower than the proposed Project due to the reduction in single-family units, with trip lengths (VMT) being greater for the Resort due to the type of land use in comparison to residential uses. The reduction in ADT and VMT for residential units would be offset by an increase in ADT from the non-residential land use of the Resort. Therefore, VMT likely would be comparable to the proposed Project/Alternative H and VMT per capita would be equal to or slightly higher than the proposed Project.

Alternative G

Alternative G would implement 465 single-family residential units (a reduction of 1,473 residential units) on a development footprint that is 556 acres smaller than the proposed Project. This alternative would implement a larger Resort of 800 rooms on 20 acres. As with the proposed Project, no golf course would be developed. The absence of an on-site elementary school would result in an increase in trip lengths (VMT) as students within the Village would need to travel off-site and could not bike or walk to school. Overall ADT would be approximately 15,530 trips lower than the proposed Project due to the large reduction in single-family units that offsets the greater trip lengths resulting from the Resort and the absence of an elementary school. Therefore, VMT likely would be less than the proposed Project/Alternative H and VMT per capita likely would be equal to the proposed Project.

RO-1-19 The comment provides a summary statement and defers to another letter submitted during the public comment period for the 2019 Recirculation (RO-6). This comment does not raise any new issue or include any new substantive comment concerning the adequacy of the environmental analysis; therefore, no further response is provided.

RO-1-20 The comment states that the commenter has concerns about inadequate project descriptions being common among County General Plan Amendments, including the CAP. The comment does not address this Project specifically and the commenter has provided no specific project-related examples of inadequacy. Therefore, no further response to this comment can be provided.

RO-1-21 The comment references litigation concerning the County's CAP. The commenter is critical of the use of out of county, out of state, and out of country carbon offsets in the Project's recommended mitigation measures for the reduction of GHG emissions. In response, please refer to Global Response R1: Carbon Offsets, and Global Response R2: County of San Diego Climate Action Plan. The former response addresses the use of carbon offsets under CEQA as a recognized method to mitigate GHG emissions, and the latter response addresses the status of the County's CAP and its relevance to the CEQA analysis undertaken for the Village 13 project. As discussed therein, the use of carbon offsets does not violate the County's 2011 General Plan Update. (See also Appendix E-1 of the 2019 Recirculation Package.)

RO-1-22 This comment provides conclusionary remarks not specifically related to the proposed Project. This comment does not raise any new issue or include any new substantive comment concerning the adequacy of the environmental analysis; therefore, no further response is provided.

Attachment RO1.1

The ABC Green Home™

Product Partner Profile

SoCalGas

A Sempra Energy utility®

DUAL-FUEL ZNE HOMES WITH NATURAL GAS ARE MORE APPEALING TO CONSUMERS

AND MORE COST-EFFECTIVE FOR BUILDERS THAN ELECTRIC-ONLY

As California moves closer and closer to the goal of achieving Zero Net Energy (ZNE) in residential new construction by 2020, figuring out how to get there becomes increasingly important for home builders.

While ZNE as a concept is fairly basic - the total amount of energy used by a building on an annual basis is roughly equal to the amount of renewable energy created on the site – in practice it's a bit more complicated.

83% of SoCalGas® customers surveyed prefer a dual-fuel ZNE home.[1]

In California, additional considerations such as the Time Dependent Valuation (TDV) are also factored into the equation and must be taken into account when looking at how to build to ZNE.

TDV includes the cost to provide energy based on time-of-use and the primary source of that energy (natural gas, coal, nuclear, hydroelectric, solar, wind, etc.) as well as other variations in cost due to climate and geography.

Builders must offset the prospective home's energy consumption on a TDV basis by balancing on-site energy production and cost-effective energy-efficiency measures.

In order to measure the value of a dual-fuel approach to ZNE, SoCalGas® commissioned Navigant Consulting, Inc., to prepare a Technology Report that evaluated dual-fuel (natural gas and electricity) and electric-only ZNE homes against a baseline electric-only home compliant with the upcoming 2016 California Title 24 building codes.[2]

Their analysis revealed that single-family ZNE homes using natural gas appliances offer several key technical, economic and regulatory advantages under the TDV definitions.

▲ The ABC Green Home 2.0 will feature high-efficiency natural gas appliances as part of its overall strategy to help achieve green goals like Zero Net Energy.

One finding was that dual-fuel ZNE homes always have lower incremental costs to the homebuilder and the homeowner.

For example, dual-fuel ZNE homes require smaller solar photovoltaic (PV) systems, reducing the up-front cost by an average of over $2,000 (9%) compared to electric-only designs. The lower up-front cost contributes to quicker payback periods.

The report also notes that dual-fuel ZNE homes will need to incorporate solar PV systems and a variety of building envelope, HVAC, and water heating efficiency measures.

In addition, a smaller solar PV capacity requirement allows homebuilders greater flexibility with roof design, orientation, etc.

These benefits appear to support past research showing homeowner preferences for improved roof aesthetics, lower ownership costs and incorporating gas appliances for cooking, water and space heating, and other end-uses.

In recent Customer Insight Panel surveys of SoCalGas residential customers, 83% preferred a dual-fuel ZNE home if given the choice between electric-only or dual-fuel (natural gas and electricity).[1]

In category after category, the majority of customers expressed their preference for natural gas for cooking (90%), water heating (82%), space heating (80%), and clothes drying (74%).[3]

Only 6% of respondents preferred an electric-only ZNE home.[1]

Residential ZNE will be the standard in California soon. SoCalGas is committed to helping builders get there efficiently and cost-effectively while satisfying home buyer expectations.

1. SoCalGas Residential Customer Insight Panel October, 2015; base: 644 respondents

2. Navigant Consulting, Inc.; Strategy and Impact Evaluation of Zero-Net-Energy Regulations on Gas-Fired Appliances; July, 2015

3. SoCalGas Residential Customer Insight Panel November, 2015; base: 1,524 respondents

Learn more at www.socalgas.com

INNOVATION | COOKING

BUILD FOR TOMORROW TODAY WITH NATURAL GAS

It's no surprise that most people prefer to cook with natural gas. In fact, 90 percent of SoCalGas® residential customers in a recent survey stated that natural gas is better for cooking than electricity.[1]

Why? Some of the reasons mentioned included: more control over temperature; heats faster; cooks more evenly; turns off immediately; and direct use of natural gas is more energy-efficient.[2]

Installing high-efficiency natural gas appliances including cooktops and ovens in new homes can help achieve green goals like Zero Net Energy while satisfying consumer "likes."

Don't put your new home buyers' desires on the back burner – give them the comfort, control, reliability and efficiency of natural gas.

SoCalGas – Your Partner in the Clean Energy Future.

SoCalGas
A Sempra Energy utility®

The Green Home™
Presenting Sponsor

1. SoCalGas Residential Customer Insight Panel November, 2015; base: 1,524 respondents
2. Direct use of natural gas maintains 92 percent of usable energy. Converting natural gas to electricity for electric end-use maintains only 32 percent of usable energy. Source: American Gas Association, 2015 Playbook, page 44